

Title: ROTARY ENGINE
SN: 10/781,969

Examiner: Thai-Ba Trieu
Art Unit 3748

REMARKS

Claims 1 through 11 stand rejected under 35 U.S.C. 102(b) as being anticipated by *Myles*, U.S. Patent Number 3,087,671.

Myles teaches a rotary engine comprising an annular cylinder having two annular wall members that are rotatable in relation to each other. As shown in the drawing figures, the annular member 3 of cylinder 1 of *Myles* is adapted to rotate in relation to the annular wall member 2. See *Myles*, Column 2, lines 28-33; Column 3, lines 57-61.

The present invention teaches a first piston **1** and a second piston **2** that orbit within an enclosed annular chamber. One skilled in the art would understand from reading the specification that the annular chamber does not have walls that rotate relative to each other; rather, the pistons orbit within the fixed annular chamber. See Drawings, and, for example, Specification, Page 4, lines 1-4; page 7, lines 7-10; page 8, lines 1-5.

Claim 1 has been amended to indicate that the annular chamber does not have a member that rotates relative to any other member of the annular chamber. The amendment distinguishes the present invention from the invention of *Myles*.

Myles teaches dogs that are located on the pistons. See, for example, dog 22 on piston 8 (*Myles*, Figure 3 and Column 9, lines 57-63). The present invention shows dogs that are fixed to the stator, and which pivot relative to the annular chamber. See Drawing Figures, and Page 6, lines 11-12.

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Claim 3 has been amended to require that the first dog is not affixed to the first piston or the second piston. This limitation distinguishes the present invention from the teachings of *Myles*.

One skilled in the art would understand that the annular chamber of the present invention may be formed as a unit. See Drawings, and the specification generally. Claim 5, which depends from Claim 1, and Claim 6, which also depends from Claim 1, are amended to require that the annular chamber be formed as a unit. This amendment distinguishes the present invention from the annular cylinder of *Myles*, which has two separate annular wall members, and is not formed as a unit.

Myles requires the use of several pistons, and teaches the use of eight pistons. The use of more than 2 piston leads to issues of ignition timing, fuel supply timing, exhaust timing and the like. The present invention, in its specification, teaches the use of two pistons. The use of two pistons avoids the problems associated with the use of the multiple pistons on the order of *Myles*. Further, the pistons of *Myles* are locked relative to one of the rotatable wall members, whereas in the present invention, the pistons orbit within the annular chamber. The use of more than two pistons in the present invention may lead to issues with the pistons undesirably colliding with each other.

Newly added independent Claim 12 requires that the rotary engine of the present invention have no more than two pistons disposed within the annular chamber. This limitation distinguishes the present invention from invention of *Myles*.

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Newly added independent Claim 13 requires that the first piston and second piston travel complete rotations of all of the annular chamber and within the annular chamber. This distinguishes the present invention from the invention of *Myles*, which locks each of the pistons to the moveable annular wall portions of the cylinder to cause the cylinder portions to rotate when the piston rotates. The present invention is distinguished from *Myles*, wherein the pistons are locked relative to one of the walls, but not relative to the opposite wall, meaning that the pistons of *Myles* do not rotate relative to the entire annular chamber. *Myles*, Column 2, lines 33-37.

Newly added Claims 14 and 15 depend from independent claims 12 and 13 respectively, and require that no annular wall member of the annular chamber rotates relative to any other annular wallmember of the annular chamber.

Newly added dependent Claim 16 depends from independent Claim 13, and requires the rotary engine to have no more than two pistons disposed within the annular chamber.

Newly added dependent Claims 17 and 18 depend from independent Claims 12 and 13 respectively, and require first and second dogs that limit travel of the first and second pistons respectively, and also require that the first dog is not affixed to the first piston or second piston.

Newly added dependent Claim 19 and 21 depend from independent Claims 12 and 13 respectively, and require that the annular chamber is generally circular and that the annular chamber is formed as a unit.

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Newly added dependent Claims 20 and 22 depend from independent Claims 12 and 13 respectively, and require that the annular chamber has a generally circular cross section and that the annular chamber is formed as a unit.

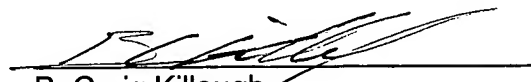
Newly added Claim 23 requires that at least one of the first piston and the second piston comprise a magnet. Support for this claim is found at drawing Figure 9, and at page 8, line 8 *et seq.* of the Specification.

Newly added dependent Claim 24 depends from Claim 1, and requires that an electrical current is generated as said first piston and said second piston rotate within said stator.

The paragraph appearing at Page 6, line 11 has been amended to correct typographical errors. In line 11, the word [he] is replaced with the word the. In line 14, a period has been inserted after the word "pistons".

It is respectfully submitted that Claims 1, 3, 5-6, 9-24 are in condition for allowance. Review and allowance at the earliest possible date is requested.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this Response to Office Action Mailed August 26, 2004 and Postcard are being deposited with the United States Postal Service with sufficient postage for first class mail addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia 22313-1450 on this 24th day of November 2004.

A handwritten signature in cursive script that reads "Stephanie Ellis". The signature is written over a horizontal line.

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